

**Amendment and Response**

Applicant: Daniel J. McGurran et al.

Serial No.: 09/872,532

Filed: June 1, 2001

Docket No.: 56763US002 (M120.221.101)

Title: COLOR STABLE PIGMENTED POLYMERIC FILMS HAVING DYES FOR COLOR ADJUSTMENT**REMARKS**

These remarks are made in response to the Final Office Action mailed April 19, 2005. Claims 26 and 27 were rejected under 35 U.S.C. § 112, first paragraph. In addition, claims 1, 2, 10, 11, 13-19, 21, 24, and 25 were rejected under 35 U.S.C. § 102(b) as being anticipated by McGurran et al., U.S. Patent No. 6,569,517 ("McGurran"). Claims 22 and 23 were rejected under 35 U.S.C. § 103(a) as being unpatentable over McGurran in view of Weaver et al., U.S. Patent No. 6,248,816 ("Weaver").

With this Response, claim 24 has been amended to address an unintentional typographical error unrelated to patentability. Claims 1, 2, 10, 11, 13-19, and 21-27 remain pending in the application and are presented for consideration and allowance.

**Claim Rejections under 35 U.S.C. §112**

Claims 26 and 27 were rejected under 35 U.S.C. §112, first paragraph. The Office Action takes the position that claims 26 and 27 include subject matter that was not disclosed in the Specification in such a way as to reasonably convey to one skilled in the art that the inventors had possession of the claimed subject matter at the time the application was filed. Applicant respectfully disagrees.

Claims 26 and 27 are directed to window films. Support for this language can be located through the specification. For example, at page 1, line 14 it is taught that tinted polymeric films can be applied to a base transparent substrate such as a window or auto glass pane to provide a neutral color tint to the window or auto glass pane. In addition, at page 2, line 6, U.S. Application No. 09/633,911, filed on August 8, 2000, is incorporated into the Specification by reference. U.S. Application No. 09/633,911 issued as U.S. Patent No. 6,811,867 and teaches at column 7, lines 35-37 the use of optical bodies to tint automotive or window glazings, such as glass or polycarbonates. Additionally, at page 4, line 19, the pending Specification teaches "still further, the present disclosure provides articles, including pigmented window and auto glass films, that incorporate the above color-staple optical bodies."

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Thus, it is respectfully submitted that the Specification reasonably conveys to skilled artisans that the Applicant had possession of the claimed window film subject matter at the time the application was filed. For this reason, it is respectfully requested that the rejections to claims 26 and 27 under 35 U.S.C. § 112, first paragraph, be withdrawn. Notably, it is noted that no other rejections to claims 26 and 27 were identified, such that is assumed that claims 26 and 27 are allowable. MPEP §2163

**Claim Rejections under 35 U.S.C. § 102**

Claims 1, 2, 10, 11, 13-19, 21, 24, and 25 were rejected under 35 U.S.C. § 102(e) as being anticipated by McGurran.

McGurran does not teach or suggest the addition of a dye to an optical body. The Office Action takes the position at page 4, four lines from the top, that: "other pigments, such as indanthrone, copper phthalocyanine, and cobalt aluminates can be used in combination with the carbon black to decrease the  $b^*$  value of the polymeric core to produce a neutral gray optical body". In appreciation of the position taken in the Office Action, Applicant respectfully submits the following to clarify the difference between a pigment and a dye.

A pigment, in all cases, is a collection of particles (usually small particles) often dispersed in a composition to reflect or absorb light in establishing a color. Thus, a pigment is a collection of (small) particles dispersed in a solvent. For example, paints employ pigments to absorb certain wavelengths of light and reflect other wavelengths of light in tailoring a subjective color for the paint. Because pigments are formed of particles, pigments scatter light and are associated with haze and reduced film clarity.

In contrast, a dye is soluble and is dissolved in a solvent. Thus, a dye is a molecule in solution that can be chemically selected to transmit, reflect, and/or absorb light. As a consequence of the dye being in solution with its solvent, a dye preserves a high degree of optical clarity.

Thus, a fundamental difference exists between a pigment and a dye. Based upon this clarification, it is respectfully submitted that McGurran fails to teach or suggest the addition of a dye to an optical body. Simply stated, McGurran is limited to pigments, and does not teach a

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dye. Thus, McGurran clearly does not anticipate claims 1, 2, 10, 11, 13-19, 21, 24, and 25. It is respectfully requested that the rejections under 35 U.S.C. §102(e) to these claims be withdrawn. Even further, it is noted that none of the pigments mentioned in McGurran are blue dyes, such that claim 25 (as well as claims 26 and 27) is further distinguished.

**Claim Rejections under 35 U.S.C. §103**

Claims 22 and 23 were rejected under 35 U.S.C. §103(a) as being unpatentable over McGurran in view of Weaver. As a point of reference, claim 22 depends from independent claim 1, and claim 23 depends from independent claim 14. Based upon the following reasoning, it is respectfully submitted that a *prima facie* case of obviousness for the rejection of claims 22 and 23 over McGurran in view of Weaver cannot be established.

Three criteria must be satisfied to establish a *prima facie* case of obviousness. First, the Examiner must show that some objective teaching in the prior art or some knowledge generally available to one of ordinary skill in the art would teach, suggest, or motivate one to modify a reference or to combine the teachings of multiple references. *In re Fine*, at 1074. Second, the prior art can be modified or combined only so long as there is a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375, 379 (Fed. Cir. 1986). Third, the reference or combined references must teach or suggest all of the claim limitations. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (C.C.P.A. 1974). *See also*, M.P.E.P. §2143.

There must be some teaching somewhere that provides the suggestion or motivation to combine prior art teachings and applies that combination to solve the same or similar problem that it addresses. *In re Nilssen*, 851 F.2d 1401, 1403, 7 USPQ2d 1500, 1502 (Fed. Cir. 1988); *In re Wood*, 599 F.2d 1032, 1037, 202 USPQ 171, 174 (C.C.P.A. 1979).

The test for obviousness under § 103 must take into consideration the invention as a whole; that is, one must consider the particular problem solved by the combination of elements that define the invention. *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1143, 227 USPQ 543, 551 (Fed. Cir. 1985). At the same time, a prior patent cited as a Section 103 reference must be considered in its entirety, “i.e. as a whole, including portions that lead away from the invention.” *Id.* That is, the Examiner must recognize and consider not only the similarities, but

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also the critical differences between the claimed invention and the prior art as one of the factual inquiries pertinent to any obviousness inquiry under 35 U.S.C. § 103. *In re Bond*, 910 F.2d 831, 834, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990) (Emphasis added).

Reference is made to the pending Specification at page 12, line 6 – page 13, line 12. The Specification teaches that the claimed optical bodies include one or more dyes for color adjustment with respect to a color imparted by the dispersed particulate pigment. In this regard, the color is defined by the International Commission On Illumination based upon L\*, a\*, and b\* color scales.

As a point of reference, the a\* and b\* values relate to a hue and saturation of the color. In particular, small variations in a\* around the value of zero are associated with a grayscale, and the a\* value traverses a scale from negative a\* values indicating green to positive a\* values indicating red. In a like manner, small variations of b\* around the value zero correspond to a grayscale, and negative b\* values indicate blue where positive b\* values indicate yellow. L\* values range from zero corresponding to black, to large positive values of L\* corresponding to whiter optical bodies.

Independent claim 1 recites in part a pigmented optical body exhibits a transmission of light within a wavelength band of interest within the visible spectrum of from 5% - 90%, wherein a dispersed particulate pigment imparts a substantial transmitted color to the optical body, the optical body comprising at least one dye added in an amount sufficient to adjust the transmitted color of the optical body to a substantially neutral gray.

Independent claim 14 recites in part a pigmented optical body wherein the optical body exhibits a transmission of light within a wavelength band of interest within the visible spectrum of from 5% - 90%, the optical body further comprising at least one dye in an amount effective to adjust the color of the optical body by no more than 15 units of a\* and no more than 15 units of b\*.

It is respectfully submitted that no suggestion or motivation exists to modify the McGurran reference to include the dye of the Weaver reference. In particular, Weaver teaches a dye added in an amount to a polymeric composition that colors molded articles such as films and fibers. See, for example, Weaver at column 1, line 10; line 59; and line 66. Specifically, Weaver

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teaches at column 2, lines 41-49 that: “the polymeric composition may exhibit **a color** of differing shades of **green and black**” depending upon the amount of dye composition that is present in the polymeric composition. (Emphasis added).

Since the polymeric composition of Weaver may exhibit a color of differing shades of green and black, it is respectfully submitted that Weaver teaches adding a dye in an amount that would shift the  $a^*$  value drastically toward the negative  $a^*$  range (indicative of green), and shift the  $b^*$  value drastically to the negative  $b^*$  range (indicative of blue). That is to say, Weaver teaches additions of dye of such large magnitudes that Weaver produces **a colorant** that does not transmit light, but rather absorbs and reflects a color of differing shades of green and black. In contrast, the film of McGurran must permit transmission of light. Col. 1, lines 59-62. Thus, a requisite suggestion to combine McGurran and Weaver does not exist.

Relying upon *In re Nilssen* at 1403, it is respectfully submitted that the Office Action fails to identify a teaching that provides a suggestion or motivation to combine McGurran and Weaver since this combination fails to teach or suggest adjusting a transmitted color of the optical body to a substantially neutral gray (claim 1), and fails to solve the adjustment of the color of the optical body by no more than 15 units of  $a^*$  and no more than 15 units of  $b^*$  (claim 14). In addition, it is respectfully submitted that the Office Action fails to recognize and consider “the critical differences between the claimed invention and the prior art” as one of the factual inquiries pertinent to any obviousness inquiry under 35 U.S.C. § 103 as the Federal Circuit requires in *In re Bonde*, at 834.

Further, the purported modification of McGurran in view of the teachings of Weaver lacks a reasonable expectation of success. In particular, Weaver is directed to colorants that absorb and reflect light. Weaver at column 1, lines 58-60. Weaver teaches at column 4, lines 26-31 a weight percent of dye having a range of two orders of magnitude. All but the lowest weight percent value recited represents a large amount of dye added to the polymeric composition. In this regard, Weaver is employing what one of skill in the art would recognize as a large quantity of dye employed to color the article (i.e., absorb and reflect light). Thus, combining the teachings of Weaver to McGurran would “color” the pigmented optical body and

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effectively eliminate transmission of light within a wavelength band of interest within the visible spectrum of about 5% to 90%, as required by independent claims 1 and 14.

In addition, the amount of dye taught in Weaver would not result in adjusting the transmitted color the optical body to a substantially neutral gray as required by claim 1, but would otherwise result in “differing shades of green and black” as taught by Weaver in column 2 at line 44. In a similar manner, the purported combination of McGurran and Weaver would fail to adjust the color of the optical body by no more than 15 units of  $a^*$  and by no more than 15 units of  $b^*$ , as required by independent claim 14.

Finally, it is noted that the Examiner did not address the discussion set forth in the previously submitted Amendment and Response (mailed January 25, 2005) relating to the specific teachings of Weaver away from the teachings of McGurran. These arguments are incorporated herein by reference. In summary, Weaver teaches away from the use of carbon black. In contrast, McGurran teaches that carbon black is a preferred material. These directly opposed teachings dictate that a requisite suggestion to combine does not exist.

Based upon the above, it is respectfully submitted that that a requisite suggestion to combine McGurran and Weaver does not exist; that a reasonable expectation of success in forming an optical body having a “substantially neutral gray” transmitted color of claim 1 or an effective color adjustment commensurate with the limitations of claim 14 is not been shown; and even if combined, the resultant optical body would not exhibit a transmission of light as required by independent claims 1 and 14.

### CONCLUSION

In view of the above, Applicant respectfully submits that pending claims 1, 2, 10, 11, 13-19, and 21-27 recite patentable subject matter, are in form for allowance, and are not taught or suggested by the cited references. Therefore, reconsideration and withdrawal of the rejections and allowance of claims 1, 2, 10, 11, 13-19, and 21-27 is respectfully requested.

Applicant hereby authorizes the Commissioner for Patents to charge Deposit Account No. 50-0471 the amount of \$790.00 to cover the RCE fees as set forth under 37 C.F.R. 1.17(e).

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The Examiner is invited to telephone the Applicant's representative at the below-listed numbers to facilitate prosecution of this application.

Any inquiry regarding this Amendment and Response should be directed to Timothy A. Czaja at Telephone No. (612) 573-2004, Facsimile No. (612) 573-2005. In addition, all correspondence should continue to be directed to the following address:

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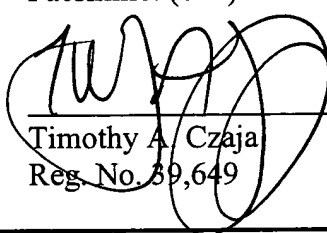
Respectfully submitted,

Daniel J. McGurran et al.,

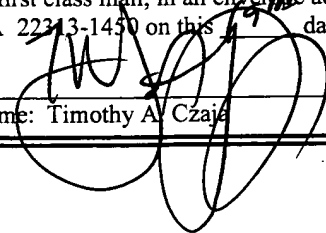
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**CERTIFICATE UNDER 37 C.F.R. 1.8:** The undersigned hereby certifies that this paper or papers, as described herein, are being deposited in the United States Postal Service, as first class mail, in an envelope address to: Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 19<sup>th</sup> day of July, 2005.

By   
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